

Applicant: FUHR, Gunter
Serial No.: To be assigned
Filed: Herewith
Page 3

Amendments to the Claims:

CLAIMS

Please amend the claims as follows and cancel without prejudice the claims marked as cancelled.

1. – 51. (Cancelled)

52. (New) Cell carrier for receiving at least one biological cell, which includes a magnetic element, a bottom element and a receiving element, wherein the receiving element is arranged on a side of the cell carrier that lies opposite the bottom element and has a surface for receiving the biological cell, wherein

the cell carrier can be moved on a solid base surface,

the bottom element forms a stable support that can be displaced on the base surface in at least one direction, and

the receiving element is formed so as to promote adhesion in a predetermined partial region of the surface.

53. (New) Cell carrier according to claim 52, in which the bottom element forms a plane support.

54. (New) Cell carrier according to claim 53, in which the plane support is formed over the whole surface or by at least three support points.

55. (New) Cell carrier according to claim 52, in which the bottom element forms a profiled support with a predetermined support profile.

56. (New) Cell carrier according to claim 55, in which the support profile forms a section of a cylinder surface.

57. (New) Cell carrier according to claim 52, in which the bottom element has an adhesion-reducing coating.

58. (New) Cell carrier according to claim 52, in which the receiving element has at least in a partial region at least one of the surface shapes consisting of a plane unstructured shape, a plane structured shape, a depression and a cavity.

59. (New) Cell carrier according to claim 52, in which the bottom element and the receiving element are arranged one above the other and form a layered structure.

60. (New) Cell carrier according to claim 59, which has a thickness of less than 200 μm and a cross-sectional surface with a lateral dimension of less than 2 mm.

Applicant: FUHR, Gunter
Serial No.: To be assigned
Filed: Herewith
Page 4

61. (New) Cell carrier according to claim 52, in which the receiving element has an edge which is provided with an adhesion-reducing coating.
62. (New) Cell carrier according to claim 52, which has a transparent partial region.
63. (New) Cell carrier according to claim 52, in which the magnetic element forms at least one of the bottom element and the receiving element or comprises a separate particle which is bound to the sample.
64. (New) Cell carrier according to claim 52, in which the magnetic element is formed from at least one material selected from the group consisting of paramagnetic, ferromagnetic and diamagnetic materials.
65. (New) Cell carrier according to claim 52, in which the magnetic element is formed from at least one induction device.
66. (New) Cell carrier according claim 52, in which the magnetic element forms a continuous layer which runs through the cell carrier.
67. (New) Cell carrier according to claim 52, in which the magnetic element comprises a number of partial elements distributed in the cell carrier.
68. (New) Cell carrier according to claim 67, in which the partial elements are arranged at a distance from at least one lateral edge of the cell carrier.
69. (New) Cell carrier according to claim 67, in which the partial elements are arranged at least at one lateral edge of the cell carrier.
70. (New) Cell carrier according to claim 52, in which the magnetic element forms at least one memory cell.
71. (New) Cell carrier according to at least one of the preceding claims, which has an outer shape with sections on different sides that are shaped so as to be complementary to one another.
72. (New) Cell carrier according to claim 52, which has a polygonal or a round outer shape.
73. (New) Cell carrier according to claim 52, the outer shape of which is selected in such a way that a plurality of cell carriers next to one another form a flat package without any gaps.
74. (New) Cell carrier according to claim 52, which has securing elements that are formed by at least one protrusion and at least one recess on the side of the cell carrier.
75. (New) Cell carrier according to claim 52, which has at least one supporting element that protrudes from a side of the cell carrier.
76. (New) Cell carrier according to claim 75, in which a number of supporting elements form the bottom element.

Applicant: FUHR, Gunter
Serial No.: To be assigned
Filed: Herewith
Page 5

77. (New) Cell carrier according to claim 52, which has at least one identification element.
78. (New) Cell carrier according to claim 52, which is adapted to receive at least one biological cell.
79. (New) Cell carrier according to claim 52, the surface of which has a lateral dimension that is selected within the range from 10 μm to 1 cm.
80. (New) Cell carrier according to claim 52, which has a height that is selected within the range from 0.5 μm to 2000 μm .
81. (New) Culture carrier for receiving biological cells, which has a plurality of cell carriers according to claim 52.
82. (New) Culture carrier according to claim 81, in which the cell carriers are arranged next to one another, wherein the cell carriers make contact with one another.
83. (New) Culture carrier according to claim 82, in which the cell carriers are secured to one another.
84. (New) Culture carrier according to claim 81, in which the receiving elements of the cell carriers form a flat culture carrier surface.
85. (New) Culture carrier according to claim 81, in which the receiving elements of the cell carriers form a curved culture carrier surface.
86. (New) Culture carrier according to claim 81, in which the receiving elements of the cell carriers form a culture carrier surface with steps.
87. (New) Manipulation device for biological samples, which includes:
- a solid base surface which is adapted for positioning at least one cell carrier according to claim 52, and
 - an actuator for exerting a magnetic force on the at least one cell carrier.
88. (New) Manipulation device according to claim 87, in which the base surface has a flat shape.
89. (New) Manipulation device according to claim 87, in which the base surface has a curved shape.
90. (New) Manipulation device according to claim 87, in which the base surface has a surface structure with protrusions and/or depressions.
91. (New) Manipulation device according to claim 90, in which the surface structure forms at least one shaped element selected from the group of shaped elements consisting of free areas, channels, branchings, annular paths and courts.

Applicant: FUHR, Gunter
Serial No.: To be assigned
Filed: Herewith
Page 6

92. (New) Manipulation device according to claims 87, in which two base surfaces are provided, the free surfaces of which face towards one another with a spacing therebetween and are both designed to receive cell carriers.

93. (New) Manipulation device according to claim 87, in which the base surface comprises a magnetic or magnetizable material at least in partial regions.

94. (New) Manipulation device according to claim 87, in which the actuator has at least one force element selected from the group of force elements consisting of permanent magnets, paramagnets, ferromagnets and diamagnets, electrically excitable magnets and magnetic fluids.

95. (New) Manipulation device according to claim 94, in which the force element can be displaced relative to the base surface by means of a displacement device.

96. (New) Manipulation device according to claim 87, which comprises a monitoring device.

97. (New) Method for manipulating biological cells, comprising the steps:

- positioning at least one biological cell on at least one cell carrier, which is arranged such that it can be displaced on a solid base surface, and
- moving the cell carrier with the at least one biological cell on the base surface by exerting a magnetic force.

98. (New) Method according to claim 97, in which a number of cell carriers are positioned next to one another, so that cells and/or cell components on the cell carriers enter into interaction with one another.

99. (New) Method according to claim 98, in which cells move between neighboring cell carriers.

100. (New) Method according to claim 98, in which cells and/or cell components on neighboring cell carriers make contact with one another.

101. (New) Method according to claim 100, in which cytological imprinting of cells on neighboring cell carriers takes place.

102. (New) Method according to claim 101, in which the magnetic force acts on the sample and/or on the cell carrier.